

β¹ cont.
(a) the composite plastics composition comprises 10 to 45 weight percent of the crosslinked polymer, based on the weight of the composite plastics composition, and the crosslinked polymer has a particle size substantially from 0.2 to 1.2 millimeters;

(b) the crosslinked polymer comprises 0.1 to 15 weight percent inert filler and 0.1 to 20 weight percent crosslinker, based on the total weight of crosslinked polymer; and

(c) the crosslinked polymer is visually differentiable from the thermoplastic matrix, wherein the thermoplastic matrix comprises 50 to 100 weight percent poly(alkyl (meth)acrylate) and zero to 50 weight percent impact modifier, based on the weight of thermoplastic matrix and wherein the impact modifier is a multi-stage sequentially-produced polymer comprising at least three stages in a sequence of a non-elastomeric first stage, an elastomeric second stage and a non-elastomeric third stage, and wherein the composition is capable of multiple passes through extrusion or molding.

β²
12. (amended twice) A process for preparing a composite plastics composition comprising:

(a) preparing a crosslinked polymer comprising 0.1 to 15 weight percent inert filler and 0.1 to 20 weight percent crosslinker, based on the weight of crosslinked polymer;

B² cont.
(b) comminuting the crosslinked polymer to particles having a particle size substantially from 0.2 to 1.2 millimeters;

(c) dispersing 10 to 45 weight percent of the particles of crosslinked polymer within 55 to 90 weight percent of a thermoplastic matrix by a heat processing treatment; and

(d) recovering the composite plastics composition as a particulate material,

wherein the thermoplastic matrix comprises 50 to 100 weight percent poly(alkyl (meth)acrylate) and zero to 50 weight percent impact modifier, based on the weight of thermoplastic matrix and

wherein the impact modifier is a multi-stage sequentially-produced polymer comprising at least three stages in a sequence of a non-elastomeric first stage, an elastomeric second stage and a non-elastomeric third stage, and wherein the composition is capable of being extruded or injection molded.

Add new Claim 20.

B³ Sub. 1
C²
20. A composite plastics composition comprising a particulate crosslinked polymer dispersed within a thermoplastic matrix, wherein:

(a) the composite plastics composition comprises 10 to 45 weight percent of the crosslinked polymer, based on the weight of the composite plastics composition, and the

crosslinked polymer has a particle size substantially from 0.2 to 1.2 millimeters;

(b) the crosslinked polymer comprises 90 to 99.5 weight percent monomer units selected from one or more of vinylaromatic monomer and (meth)acrylic monomer and 0.5 to 10 weight percent crosslinker, based on the weight of crosslinked polymer, wherein the crosslinker is one or more of allyl methacrylate, ethylene glycol dimethacrylate and divinylbenzene; and

(c) the crosslinked polymer is visually differentiable from the thermoplastic matrix,

wherein the thermoplastic matrix comprises 50 to 100 weight percent poly(alkyl (meth)acrylate) and zero to 50 weight percent impact modifier, based on the weight of thermoplastic matrix and

wherein the impact modifier is a multi-stage sequentially-produced polymer comprising at least three stages in a sequence of a non-elastomeric first stage, an elastomeric second stage and a non-elastomeric third stage, and

wherein the composition is capable of multiple passes through extrusion or molding.

Cancel Claims 5 and 6.

REMARKS

Prior to this Response and Amendment the claims pending in the application were Claims 1(amended),